

Work Order ID 138329

Tuesday, October 27, 2015 11:26:34 AM

parts for an order shipping Feb 16
138329 + stock.

Page 1

Item ID: D3639-4 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Doubler
 Start Date: 10/26/2015 Start Qty: 2.00 ***2* 10 SH** Cust Item ID:
 Required Date: 10/26/2015 Req'd Qty: 2.00 ***2* 10** Customer:
 Reference:

Approvals: Process Plan: MLJ Date: 0012220 Tooling: _____ Date: _____
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____
 Run Start ***NR1***
 Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D3639	Rev A

100 0.00

100

Waterjet

FLOW CNC Waterjet

FLOW WATER JET

Memo

1-Cut as per Dwg D3639

Dwg Rev: AA

Prog Rev: AA

2-Deburr if necessary

0.00

110

QC2- Inspect parts off machine FAI/FAIB

0.00

110

QC

Quality Control

Memo

0.00

120

QC8- Inspect parts - second check

0.00

120

QC

Quality Control

Memo

0.00

12 16-2-12 *[Signature]*

DAS
50
9-89

12 16-2-12 *[Signature]*

DAS
50
9-89

(12) 12 33

DAS
33
9-89

FEB 12 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY																																																																																																																											
Environment	☐	Design	☐	Doc/Data	☐	Equip/Tooling	☐	Handling/Pre	☐	Material	☐	Internal Transport	☐	Tribal Knowledge	☐	LOA	☐	Substation	☐	Past Expiry Date	☐	Misidentified	☐	No Re-verification	☐	Operator	☐	Offset/Setup	☐	Supplier	☐	Training	☐	Use for Testing	☐	Poor Information	☐	Rushing	☐	Product Improvement	☐	Process Improvement	☐	Manufacturing Process	☐	Past Due	☐	Pressure/Forced	☐	Bending	☐	Centre Not Concentric	☐	Cracks	☐	Crimp/Kink/Ripple/Wave	☐	Cuffs	☐	Crushing	☐	Heat Treat	☐	Wave/Twist in Tube	☐	Marks/Chatter	☐	Temperature/Cure	☐	Set-up	☐	BOM/Route	☐	Broken/Damage/Defect	☐	Inspection Incomplete/Unqualified	☐	Contamination	☐	Countersink	☐	Cut Too Short	☐	Instructions Incomplete/Unclear	☐	Drill Holes	☐	Power Loss/Surge	☐	Folio/Program	☐	Grain	☐	Weld	☐	Wrong Stock Pulled	☐	Out of Sequence	☐	Off-set	☐	Mislabeled	☐	Fit/Function	☐	Misaligned/off center	☐	Positioned Wrong	☐	Outside Dimensions	☐	Over/Under tolerance	☐	Part Incorrect	☐	Part Lost/Missing	☐	Part Moved	☐	Drawing	☐	Finish	☐	Misread	☐	Turning Sequence	☐
OTHER : _____																																																																																																																															

Work Order ID 138329

Tuesday, October 27, 2015 11:26:34 AM

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Page 2

Item ID: D3639-4

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Doubler

Start Date: 10/26/2015 Start Qty: 2.00

2

Cust Item ID:

Required Date: 10/26/2015 Req'd Qty: 2.00

2

Customer:

Reference:

Run Start

NR1

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop

NR2

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	NC BRAKE	0.00			DAS 30 9-89	12			FEB 16 2016
130									
Brake NC	Memo	0.00							
Brake NC	Form as per Dwg D3639								
140	QC5- Inspect part completeness to step on W/O	0.00							DAS 38 9-89
140									
QC	Memo	0.00							
Quality Control									FEB 16 2016
150	Chemical Conversion Coat per QSI005 4.1	0.00							
150									
HandFinish	Memo	0.00							
Hand Finishing									

12 16-2-17

DQA: _____ Date: _____



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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
OTHER : _____									

Work Order ID 138329

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138329

Page 3

Item ID: D3639-4 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Doubler
Start Date: 10/26/2015 Start Qty: 2.00 ***2*** Cust Item ID:
Required Date: 10/26/2015 Req'd Qty: 2.00 ***2*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	QC7-Inspect Chemical Conversion Coat	0.00							
160						(12)			
QC	Memo	0.00							
Quality Control									DAS 38 9-89 FEB 17 2016
170	Identify as per dwg & Stock Location: <u>51234A</u>	0.00							
170						12			
Packaging	Memo	0.00							
Packaging									DAS 6 9-89 FEB 19 2016
180	QC21- Final Inspection - Work Order Release	0.00							
180									
QC	Memo	0.00							
Quality Control									FEB 19 2016

ML5 FEB 19 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

Picklist Print

Tuesday, October 27, 2015 11:26:33 AM

Page 1

Work Order ID: 138329

138329

Parent Item: D3639-4

D3639-4

Parent Item Name: Doubler

Start Date: 10/26/2015

Required Date: 10/26/2015

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP Rev:A New Issue 07-07-20 JLM Verified By:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M2024T3S.050		Purchased		No		100	sf	68.6000	0.4277	0.900421			
M2024T3S 050									**	<u>16-2-12 JH</u>			
2024-T3 .050 sheet													

Location

Loc Qty

Loc Code

MAT022

68.6

m13564

68.6

135560

5.638

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

DART AEROSPACE LTD		Work Order: 138329
Description: Doubler		Part Number: D3639-4
Inspection Dwg: D3639 Rev: A		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.625	+0.008/-0.001	0.625	✓		DC02	
Ø0.191	+0.005/-0.001	0.191				
Ø0.098	+0.004/-0.001	0.098				
0.45	+/-0.030	0.45				
1.350	+/-0.010	1.35				
2.25	+/-0.030	2.25				
3.15	+/-0.030	3.15				
4.05	+/-0.030	4.05				
4.95	+/-0.030	4.95				
5.85	+/-0.030	5.85				
6.75	+/-0.030	6.75				
7.65	+/-0.030	7.65				
8.55	+/-0.030	8.55				
9.350	+/-0.010	9.35				
9.45	+/-0.030	9.45				
10.350	+/-0.010	10.35				
11.25	+/-0.030	11.25				
12.15	+/-0.030	12.15				
12.85	+/-0.030	12.85				
13.86	+/-0.030	13.86				
13.96	+/-0.030	13.96				
0.805	+/-0.010	0.805				
1.00	+/-0.030	1				
2.100	+/-0.010	2.1				
3.30	+/-0.030	3.3				
2.000	+/-0.010	2				
2.590	+/-0.010	2.59				

Measured by: JL	Audited by: DAS 36 9-89	Prototype Approval: N/A
Date: 16-2-12	Date: 16-02-12	Date: N/A

Rev	Date	Change	Revised by	Approved
A	07.10.24	New Issue	KJ/EC/DD	

DAS
50
9-89

8 7 6 5 4 3 2 1

D

C

B

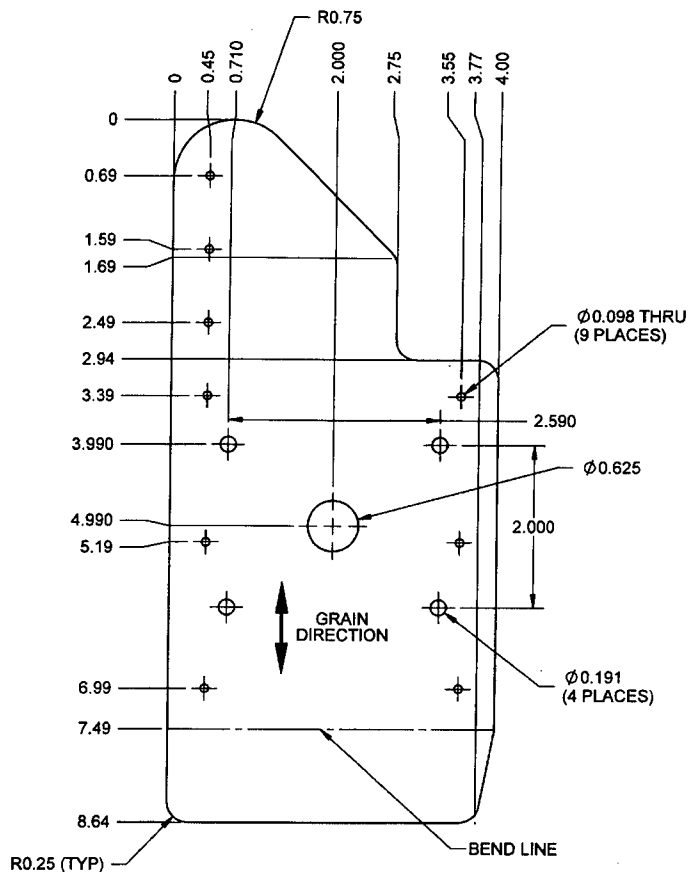
A

D

C

B

A



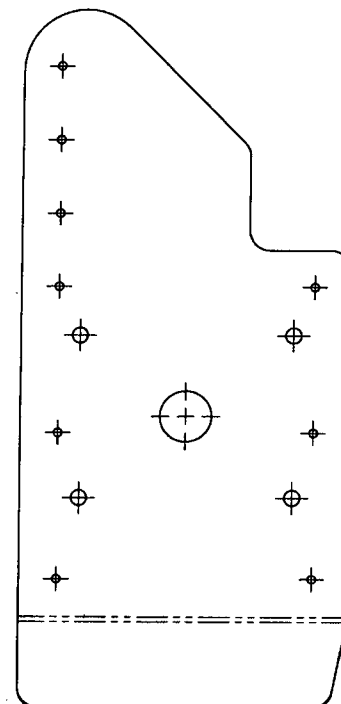
**D3639-1F FLAT PATTERN
(D3639-2F OPPOSITE)**

NOTES:

- 1) MATERIAL: 2024-T3 ALUMINUM SHEET 0.050 THICK PER QQ-A-250/4 OR AMS 4037 (REF DART SPEC M2024T3S.050)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3639-1/-2" USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 0.14 lbs

STAMP COPY
RETURN TO
CONCERNING
CONTROLLED COPY
OUT TO AMENDMENT
NOTICE
WORK ORDER

138329-ML5
15-10-28



R0.19

8.59

19°
(REF)

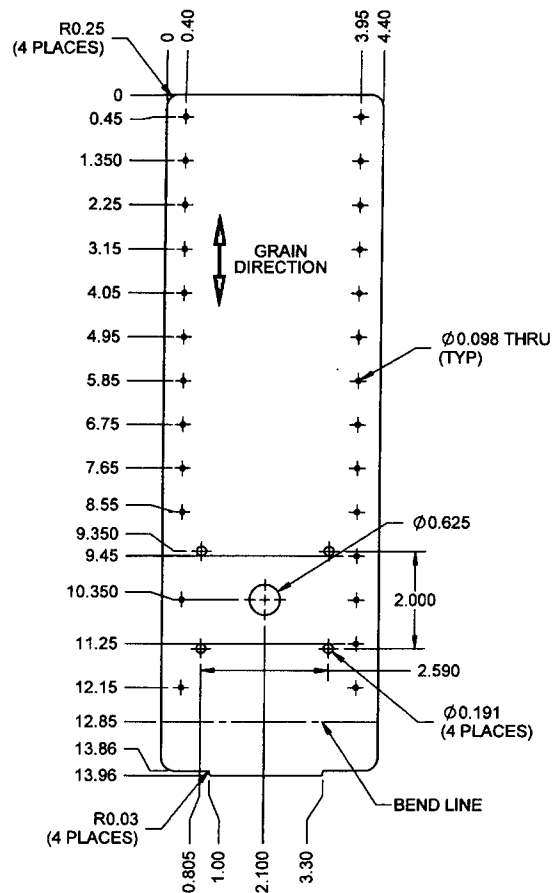
**D3639-1 DOUBLER
(WAS GENEVA P/N G10604-3)
D3639-2 OPPOSITE
(WAS GENEVA P/N G10604-6)**



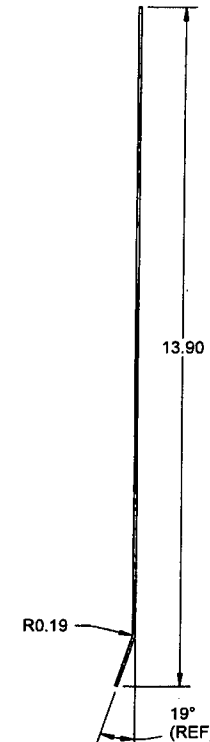
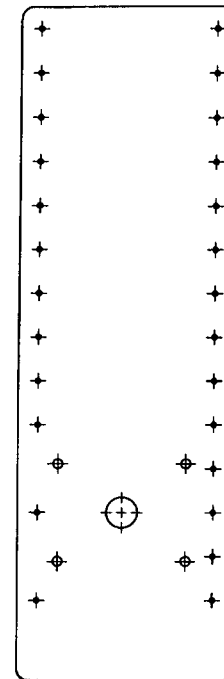
RELEASED
07-07-27

A NEW ISSUE; REPLACES G10604		LE	07.07.27
REV.	DESCRIPTION		BY DATE
DESIGN	TS	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
DRAWN	CE		
CHECKED	AB	DRAWING NO.	REV. A
MFG. APPR.	BE	D3639	SHEET 1 OF 2
APPROVED	AD	TITLE	SCALE
DE APPR.	AT	DOUBLER	2:3
DATE	07.07.27	COPYRIGHT © 2007 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

8 7 6 5 4 3 2 1



**D3639-3F FLAT PATTERN
(D3639-4F OPPOSITE)**



**D3639-3 DOUBLER
(WAS GENEVA P/N G10604-4)
D3639-4 OPPOSITE
(WAS GENEVA P/N G10604-5)**

RELEASED
07.09.07

- NOTES:**
- 1) MATERIAL: 2024-T3 ALUMINUM SHEET 0.050 THICK PER QQ-A-250/4 OR AMS 4037 (REF DART SPEC M2024T3S.050)
 - 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3639-3/-4" USING FINE POINT PERMANENT INK MARKER
 - 7) WEIGHT: 0.3 lbs

DESIGN	TS	DART AEROSPACE USA, INC.	
DRAWN	LEI	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		D3639	SHEET 2 OF 2
APPROVED		TITLE	SCALE
DE APPR.		DOUBLER	2:5
DATE	07.07.27	COPYRIGHT © 2007 BY DART AEROSPACE USA, INC.	
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